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10/777,361	02/12/2004	Mark Spotswood	BEAS-01312US1	5070
23910	7590	02/21/2008	EXAMINER	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/777,361

Applicant(s)

SPOTSWOOD, MARK

Examiner

ZHENG WEI

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,11-17,19,21-27,29 and 31-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-7,9,11-17,19,21-27, 29 and 31-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11-19-07

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Remarks***

1. This office action is in response to the amendment filed on 11/19/2007.
2. Claims 8, 10, 18, 20, 28 and 30 have been canceled.
3. Claims 1, 11 and 21 have been amended.
4. Claims 31-36 have been added.
5. The objection to specification is withdrawn in view of applicant's amendment.
6. The objection to drawings is withdrawn in view of applicant's replacement sheet.
7. The double patenting rejection to claims 1, 9, 11, 19, 21 and 29 is withdrawn in view of applicant's filed Terminal Disclaimer.
8. The 35 U.S.C. 112 second paragraph rejection to claims 10, 20 and 30 is withdrawn in view of the Applicant's cancellation of said claims
9. Claims 1-7, 9, 11-17, 19, 21-27, 29 and 31-36 remain pending and have been examined.

***Information Disclosure Statement***

10. The information disclosure statements filed on 11/19/2007 has been placed in the application file and the information referred to therein has already been considered.

***Response to Arguments***

11. Applicant's arguments filed on 11/19/2007, in particular on pages 11-15, have been fully considered but they are not persuasive. For example:

- At the page 13, last paragraph, the Applicant submits that Taylor discloses a distributed computing environment which the programs are executed in a remote address space of the remote process and required to download from the remote address. However, it should be noted that the sever, as a well-known system, has different configurations including distributed computing system which is not required to located within same location. The plain language of Claim 11 does not exclude the server which is configured as a distributed form as Taylor disclosed.
- At the page 13, last paragraph, the Applicant points out that Taylor discloses the class loader hierarchy is indicated by a manifest file at the application level. However, Taylor at paragraphs[0050]-[0051] clearly indicates that the class loader hierarchy 350 divides class loaders into factory, root and component class loaders. Component class loaders are used to load the variable components of the system and are also in components/modules level. It also should be noted that the plain language of the claim 11 does not appear to further limit or define which level the configuration file/manifest file have to be applied.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-7, 9, 11-17, 19, 21-27, 29 and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (Taylor et al., US 2004/0019897 A1) in view of Sparks (Sparks et al., US 2003/0018950).

Claim 11:

Taylor discloses a method for loading software applications on a server, comprising the steps of:

- providing a software application, wherein said software application includes a plurality of modules and classes associated therewith (see for example, p.4, paragraph [0047]);
- parsing a control file associated with said software application, wherein said control file can be edited by a software developer (administrator) and specifies a hierarchy of classloaders to be used with the modules in said software application, and wherein the hierarchy includes a plurality of branches that are specified by the software developer to provide namespace separation between different modules separation between different modules in the software application (see for example, p.4, paragraph [0048], "An

administrator would place... and provide the population manifest 326 indicating the components that will be loaded"; paragraph [0050], "The population manifest 326 is parsed by the container 306 to construct class loader..."; paragraph [0051], "the population manifest 326 may be implemented as multiple population manifests, where each manifest comprises an XML file"; also see Fig.6, Fig.7 and related text);

- retrieving a selection of said classloaders according to the hierarchy specified by said control file (see for example, p.4, paragraph [0051], "construct class loaders as necessary to load the components indicated in the manifests"; also see paragraph [0051]); and,
- loading said modules and classes as part of said application according to said hierarchy, (see for example, p.4, paragraph [0051]-[0052], "load the components indicated in the manifests").

But Taylor only discloses the module to be reloaded without reloading other modules (see for example, p.4, paragraph [0049]-[0050], "dynamically loaded modules") and does not explicitly disclose the loading including, if a modules in said software application is being redeployed then loading only the classloaders in the branches for that module, independently of other branches in the hierarchy. However, Sparks in the same analogous art of dynamic redeploying environment discloses a feature about redeploying/reloading class without restarting the server or redeploying the application (see for example, paragraph [0066], "the system dynamically and automatically reloads classes if it detects

that code has been changed by the developer. Rather than having to restart the server, or redeploy the application (or both)"). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to redeploy a specific module without reload other modules in the application. One would have been motivated to do so to reduce the number of steps that must be performed as suggested by Sparks (see for example, paragraph [0002]-[0003])

Claim 12:

Taylor further discloses the method of claim 11 wherein said control file can be modified by a software developer to specify a particular hierarchy of classloaders to be used with a particular software application (see for example, p.4, paragraph [0051], "where each manifest comprises an XML file").

Claim 13:

Taylor also discloses the method of claim 12, wherein said control file is a deployment descriptor (see for example, p.4, paragraph [0048], "The population manifest 326 includes information on components to load in the container 306" and paragraph [0051], "where each manifest comprises an XML file").

Claim 14:

Taylor further discloses the method of claim 13, wherein said control file is interpreted by an application container constructor during deployment so as to define the application container (see for example, p.4, paragraph [0050], "The population manifest 326 is parsed by the container 306 to construct class loader...").

Claim 15:

Taylor also discloses the method of claim 14, wherein said interpretation includes traversing the hierarchy and building parent child relationships between the tiers of selected classloaders (see for example, p.4, paragraph [0051], "root chain", "The root chain is built first, then the class loaders used to load the factories and then the class loaders used to load the components").

Claim 16:

Taylor also discloses the method of claim 11, wherein said hierarchy is specified by a classloader structure declaration (see for example, Fig.6, an example of a class loader hierarchy and related text description in the specification).

Claim 17:

Taylor further discloses the method of claim 11, wherein a combination of said modules may be associated with a plurality of subordinate classloaders (see for example, p.4, paragraph [0051], "root chain", "The root chain is built first, then the



class loaders used to load the factories and then the class loaders used to load the components").

Claim 19:

Taylor further discloses the method of claim 11, wherein the server provides multiple software applications, each with their own hierarchy of classloaders (see for example, p.4, paragraph [0049], hierarchy of class loads to be employed in loading class files associated with components listed in the manifest").

Claim 33:

Taylor also discloses the method of claim 11 wherein each of the plurality of modules is one of an EJB or Web application file, together with associated classes, configuration rules and resource files fro that EJB or Web application file (see for example, Fig.2, structure of 50 of a CAR file and related text; also see paragraph [0030], The CAR file structure 50 includes the following elements, implementation resources, ad download JAR file, a Security policy and a JAR manifest).

Claim 34:

Taylor further discloses the method of claim 11 wherein the hierarchy that includes a plurality of branches specified by the software developer further comprises a plurality of nested references to modules and/or individual class files

as specified by the software developer application (see for example, p.4, paragraph [0048], "An administrator would place... and provide the population manifest 326 indicating the components that will be loaded"; also see Fig.6, Fig.7 and related text).

#### Claims 1-7, 9 and 31-32

Claims 1-7, 9 and 31-32 are system version for performing the claimed method as in claims 11-17, 19, 33 and 34 addressed above, wherein all claimed limitation functions have been addressed and/or set forth above and certainly a computer system would need to run and/or practice such function steps disclosed by reference above. Thus, they also would have been obvious.

#### Claims 21-27, 29 35 and 36:

Claims 21-27, 29 35 and 36 are computer program products version of the claimed method, wherein all claimed limitation functions have been addressed in claims 11-17, 19, 33 and 34 above respectively. It is well known in the computer art that such method steps can be implemented as computer program and can be practiced and /or stored on a computer operable media. Thus, they also would have been obvious in view of reference teachings above.

**Conclusion**

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
15. Applicant's arguments with respect to claims rejection have been considered and Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059 and Fax number is (571) 270-2059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZW



TUAN DAM  
SUPERVISORY PATENT EXAMINER